

Multi-wavelength laser engine – iFLEX-Viper



Up to 5 laser wavelengths could be chosen from 405 to 780nm!!

The iFLEX-Viper™ is a compact multi-line laser source with a modular singlemode fiber delivery system. Up to five individual lasers (selected from the range 405, 445, 488, 532, 561, 640 and 780nm) are efficiently combined and delivered through one singlemode, polarization maintaining fiber. The system is mode-hop free and wavelength stabilized as a direct result of active temperature control. A closed loop control provides long term power stability.

The iFLEX-Viper is guaranteed for long lifetime and delivers exceptional power stability with low amplitude noise. All units feature diffraction-limited output beams with zero astigmatism, high spatial coherence and low dynamic pointing error. High dynamic range analog modulation (up to 3MHz) is available on each individual laser line.

The modular approach offers independent and simultaneous control over each laser enabling new experiments not possible with AOTF controlled devices. The iFLEX-Viper is compatible with a number of commercially available imaging software packages such as Olympus cell^R™, MetaMorph® and µManager and a number of add-on interfaces ensure a complete solution for all microscope systems.

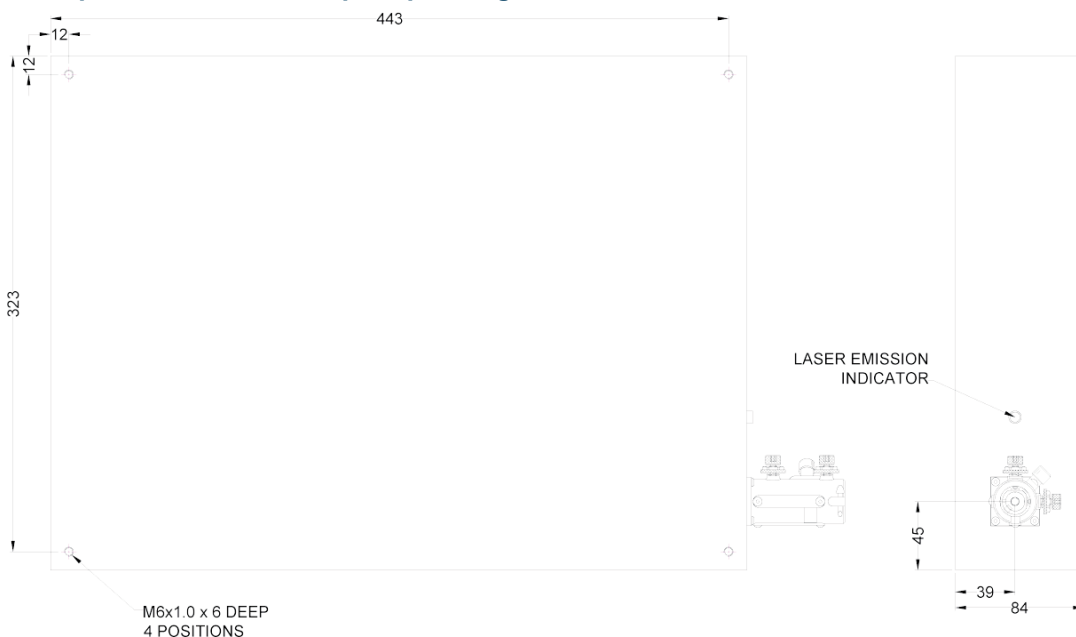
Novel design and proprietary manufacturing processes eliminate the need for user alignment of the internal laser sources and the kinematic design of the laser-to-fiber coupling enables true turnkey installation and operation.

The iFLEX-Viper is controlled via a turnkey power supply that is available in rack mountable (19 inch 2U high) or bench top versions.

Some of the product features include:

- Up to 5 laser wavelengths could be chosen from 405 to 780nm
- Laser power of up to 60mW per line by special request
- Low optical noise (0.3% rms)
- Analog modulation up to 3MHz
- Turnkey power supply with USB control
- Custom OEM versions available

Example of 5 line iFLEX-Viper operating at 405, 445, 488, 561 and 640 nm





Technical Specifications

Laser module								units
Wavelength	405	445	488	532	561	640	780	nm
Fiber coupled power (high power version)	40	20	40	40	40	40	20	mW
Fiber coupled power (low power version)	25	20	15	15	15	15	10	mW
Optical noise (20Hz to 2MHz) rms*	< 0.1	< 0.1	< 0.3	< 0.3	< 0.3	< 0.1	< 0.1	%
Optical power stability	< 2% (over 8 hours)							-
Centre wavelengths	± 5							nm
Modulation parameters*								
3dB modulation bandwidth frequency	≥ 3							MHz
Input control voltage level	0 - 5							V
Dynamic Range	≥ 30							dB
Rise and fall time over 10 – 90% intensity levels	≤ 350							ns
Fiber delivery system								
Polarization ratio	≤ -20							dB
Output termination	0.7 mm collimated, FCP, FCP8 or APC connectors							-
M squared	typ 1.1							-
Beam divergence	Diffraction limited							-
Beam position (collimated beam)	≤ ± 0.15							mm
Beam angle (collimated beam)	≤ ± 0.5							mrad
Fiber protective jacket	Stainless steel, 5 mm OD							-
Fiber length	1, 2 or 3							m
Environmental								
Max. base plate temperature	+ 40							°C
Storage temperature	10 to 50							°C
Operating pressure	Atmospheric							-
Operating temperature	10 to 40							°C
Operating humidity	Non-condensing							-
Warranty								
5000 hours or 12 months (whichever comes sooner)								

* Model specific please contact us for details
 Note: OEM versions available please call

He-Ne Lasers | Argon-Ion Lasers | He-Cd Lasers | CO₂ Lasers | Ultra Fast Lasers | DPSS Lasers | Fiber Coupled Lasers | Diode Lasers | LD & Controllers | IR Light Sources